

What is claimed:

1. A magnet assembly comprising a magnet composed of a plurality of segments, each segment having a magnetization direction that optimizes the magnetic field in a selected direction at an operating point in front of the assembly and so that the pivoting of the magnet about an axis behind the magnet through an arch of less than  $90^\circ$  causes the magnetic field direction at the operating point to vary by  $180^\circ$ .
2. A magnet assembly comprising a magnet mounted for pivoting about a first axis spaced from the magnet, and rotating about a second axis that is perpendicular to and intersects with the first axis.
3. A magnet assembly comprising a magnet mounted for pivoting about a first axis spaced from the magnet, and rotating about a second axis that is perpendicular to and intersects with the first axis, the magnet comprising a plurality of segments each with a magnetization direction such that through a combination of pivoting and rotating the magnet projects a magnetic field in any direction at an operating point spaced from the front of the assembly.
4. The magnet assembly according to claim 3 wherein operating point is at least 12 inches from the magnet assembly.
5. The magnet assembly according to claim 3 wherein the assembly projects a magnetic field at the operating point of at least 0.04T in any direction.
6. The magnet assembly according to claim 3 wherein the assembly projects a magnetic field at the operating point of at least 0.1 T in any direction.
7. In combination, first and second magnet assemblies disposed on opposite sides of a patient, each magnet assembly comprising a magnet mounted for pivoting about a first axis spaced from the magnet, and rotating about a second axis that is perpendicular to and intersects with the first axis, the magnet comprising a plurality of segments each with a magnetization direction such that through a combination of pivoting and rotating the magnet projects a magnetic field in any direction at an operating point spaced from the front of the assembly.
8. A composite focused field magnet comprising a plurality of parallel segments of magnet material, each segment magnetized in a direction to generally maximize the magnetic field in a selected

direction at an operating point in front of the magnet, the magnet having a generally cylindrical front face, and back face substantially conforming to a surface of equal contribution to the magnetic field at the magnet's operating point.

9. The composite focused field magnet according to claim 8 wherein the magnet is adapted to pivot about a first axis behind the magnet, and to rotate about a second axis perpendicular to and extending through the first axis, and wherein the magnet comprises a side edge, configured so that through the desired pivoting and rotating of the magnet, the magnet remains within an horizontally extended cylindrical inclusion zone having a 45 degree beveled forward edge.

10. The composite focused field magnet according to claim 8 wherein the magnet is mounted for pivoting about a first axis positioned behind the magnet, and wherein the radius of curvature of the generally cylindrical front face substantially equals the distance between the first axis and the front face.